REMARKS

Claims 1-7, 9-16 and 18-20 are pending in the present application. By this Response, claims 1, 4, 5, 7, 9, 10, 13, 14, 16, 18, 19 and 20 are amended and claims 8 and 17 are canceled. Independent claims 1, 7, 9, 10, 16, 18, 19 and 20 are amended to recite that the placing the subnet managers in a dormant state includes, or that the subnet managers may be placed in a dormant state in response to, receiving user input indicating that the state machines of the subnet managers are to be transitioned to a disabled state or a master subnet manager determining that an excessive amount of polling packets have been received and automatically transitions the state machines of the subnet managers to a non-active standby state. Claims 4, 5, 13 and 14 are amended to specifically recite a respective one of receiving user input and automatically transitioning state machines of subnet managers. Support for the amendments to these claims may be found at least at pages 25-31 and Figures 8 and 9 of the present specification. Reconsideration of the claims is respectfully requested.

Amendments were made to the specification to update the cross-reference U.S. Patent Applications. No new matter has been added by any of the amendments to the specification.

I.   Telephone Interview

Applicants thank Examiner Kapadia for the courtesies extended to Applicants' representative during the April 14, 2004 telephone interview. During the interview, Applicants' representative discussed the above claim amendments and their distinctions over the alleged combination of references set forth in the Office Action mailed January 15, 2004. Examiner Kapadia agreed that the primary reference, Aziz, does not appear to teach the features added by the above amendments to the claims. The substance of the interview is summarized in the following remarks.

II.   35 U.S.C. § 103, Alleged Obviousness

The Office Action rejects claims 1-20 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aziz et al. (U.S. Patent No. 6,597,956) in view of Kakemizu (U.S. Patent No. 5,805,072). This rejection is respectfully traversed.

As to independent claim 1, the Office Action states:

(A)   As per claim 1, Aziz teaches a method in a network computing system for managing a plurality of network managers in the network computing system, the method comprising:
receiving a n identification of a set of network managers within the plurality of network managers (Aziz; abstract and col. 14, lines 19-38);
allowing the set of network managers to participate in a master election to select a master network manager (Aziz; col. 15, line 66-col. 16, line 14);
placing network managers other than the set of network managers in a dormant state (Aziz col. 3, lines 35-36); and electing the master network manager from the set of network managers through the master election, wherein other network managers within the number of network managers poll the master network manager to allow the other network managers to elect a new master network manager if the master network manager fails (Aziz; col. 16, lines 36-44).
Aziz fails to expressly teach wherein the network managers are subnet managers. However, this feature is old and well known in the art, as evidenced by Kakemizu's teachings with regards to the use of subnet managers (Kakemizu; col. 3, lines 19-55). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the system taught by Aziz with Kakemizu's teaching with regards to this limitation, with the motivation of enabling the efficient managing of smaller subnets of the larger main network.

Office Action dated January 15, 2004, pages 2-3.

Claim 1 reads as follows:

1.   A method in a network computing system for managing a plurality of subnet managers in the network computing system, the method comprising:

receiving an identification of a set of subnet managers within the plurality of subnet managers;

allowing the set of subnet managers to participate in a master election to select a master subnet manager;

placing subnet managers other than the set of subnet managers in a dormant state; and

electing the master subnet manager from the set of subnet managers through the master election, wherein other subnet managers within the number of subnet managers poll the master subnet manager to allow the other subnet managers to elect a new master subnet manager if the master subnet manager fails, wherein each of the subnet managers in the plurality of subnet managers implements a state machine, and wherein placing the subnet managers other than the set of subnet managers in a dormant state includes one of receiving user input designating that the state machines of the subnet managers, other than the set of subnet managers, are to be transitioned to a disabled state, and automatically transitioning the state machines of the subnet managers, other than the set of subnet managers, to a non-active standby state if an excessive amount of polling packets are received by the master subnet manager.

Neither Aziz nor Kakemizu, either alone or in combination, teach or suggest the specific features emphasized above. That is, neither Aziz nor Kakemizu, either alone or in combination, teach or suggest a plurality of subnet managers that each implement a state machine and that placing subnet managers in a dormant state includes either receiving user input designating that state machines of the subnet managers are to be transitioned to a disabled state or automatically transitioning the state machines of the subnet managers to a non-active standby state if an excessive amount of polling packets are received by a master subnet manager.

Aziz is directed to a method and apparatus for controlling an extensible computing system that includes a virtual server farm and a wide scale computing fabric or grid. In Aziz, a control plane 206 is provided which includes farm managers which manage virtual server farms (VSFs), slave segment managers which manage the farm managers, and a master segment manager that manages the slave segment managers (see Figure 9 of Aziz). A master segment manager is elected when the control plane is established or after failure of the existing

segment manager. In Aziz, a register may store timestamps for each slave segment manager. This timestamp may be updated periodically by the slave segment managers. The slave segment managers that have most recently updated their timestamps may participate in an election of a master segment manager.

The actual election of the master segment manager is performed based on an election sequence number assigned to each slave segment manager. For example, the lowest or highest election sequence number may be used to select a particular slave segment manager to be the next master segment manager (column 15, line 65 to column 16, line 35). The slave segment managers periodically perform a health check on the master segment manager to determine whether the master segment manager is still alive. If a determination is made that the current master segment manager is no longer active, then a new master segment manager is elected (column 16, lines 36-44).

Aziz does not teach or suggest that placing subnet managers into a dormant state includes one of receiving user input designating that the state machines of the subnet managers are to be transitioned to a disabled state, and automatically transitioning the state machines of the subnet managers to a non-active standby state if an excessive amount of polling packets are received by the master subnet manager. Nowhere in Aziz is there any teaching or suggestion regarding receiving user input identifying particular ones of the segment managers that are to be disabled. Furthermore, nowhere in Aziz is there any teaching or suggest that the master segment manager determines that there is an excessive amount of polling and automatically transitions segment managers to a non-active standby state.

The Office Action, in its rejection of claim 5, alleges that Aziz teaches receiving user input identifying a set of subnet managers at column 5, lines 34-55 which reads as follows:

> Configuration and control of the computing elements and their associated networking and storage elements is performed by a supervisory mechanism that is not directly accessible through any of the computing elements in the computing grid. For convenience,

in this document the supervisory mechanism is referred to generally as a control plane and may comprise one or more processors or a network of processors. The supervisory mechanism may comprise a Supervisor, Controller, etc. Other approaches may be used, as described herein.

The control plane is implemented on a completely independent set of computing elements assigned for supervisory purposes, such as one or more servers that may be interconnected in a network or by other means. The control plane performs control actions on the computing, networking and storage elements of the computing grid through special control ports or interfaces of the networking and storage elements in the grid. The control plane provides a physical interface to switching elements of the system, monitors loads of computing elements in the system, and provides administrative and management functions using a graphical user interface or other suitable user interface.

Nowhere in this section, or any other section, of Aziz is there any mention of receiving user input identifying a set of subnet managers within a plurality of subnet managers. Moreover, nowhere in this or any other section of Aziz is there any mention of receiving user input designating subnet managers that are to have their state machines transitioned to a disabled state. Furthermore, nowhere in this or any other section of Aziz is there any mention of automatically transitioning the state machines of subnet managers to a non-active standby state if an excessive amount of polling packets are received by the master subnet manager.

Kakemizu does not teach or suggest this feature either. Kakemizu is cited as teaching a subnet manager since the Office Action admits that Aziz does not teach subnet managers. Kakemizu is directed to a virtual channel connection method in which subnet managers are utilized. As with Aziz, Kakemizu provides no teaching or suggestion regarding a user input that designates subnet managers whose state machines are to be transitioned to a disabled state or automatically transitioning state machines of subnet managers to a non-active standby state if an excessive amount of polling packets are received by a master subnet manager.

Thus, neither Aziz nor Kakemizu, either alone or in combination, teach or suggest these features of independent claim 1. The other independent claims 7, 9, 10, 16, 18, 19 and 20 recite similar features that are likewise, not taught or

suggested by the alleged combination of references. Claims 9, 18 and 20 include language very similar to that of claim 1. Claims 7, 10, 16 and 19 recite that the subnet manager implements a state machine and that the subnet manager may be disabled by one of receiving user input designating that the state machine of the subnet manager is to be transitioned to a disabled state and receiving a message from a master subnet manager, in response to a determination that there is an excessive amount of polling traffic, that the state machine of the subnet manager is to be transitioned to a non-active standby state. Neither Aziz nor Kakemizu, either alone or in combination, teach or suggest these features.

In addition to the above, claims 4, 5, 13 and 14 recite specific ones of the options set forth in the independent claims 1 and 10. That is, claims 4 and 13 recite that placing of the subnet managers in a dormant state includes, or is in response to, a determination that an excessive amount of polling packets are received by the master subnet manager which automatically transitions the state machines of the subnet managers to a non-active standby state. Claims 5 and 14 recite that the placing of the subnet managers in a dormant state includes, or is in response to, receiving user input designating that the state machines of the subnet managers are to be transitioned to a disabled state. As discussed above, neither of the references teach or suggest these features.
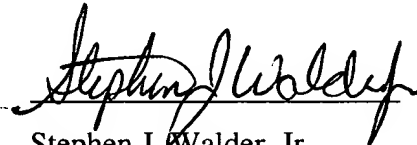
In view of the above, Applicants respectfully submit that neither Aziz nor Kakemizu, either alone or in combination, teach or suggest the features of independent claims 1, 7, 9, 10, 16, 18, 19 and 20. At least by virtue of their dependency on these independent claims, respectively, neither Aziz nor Kakemizu, either alone or in combination, teach or suggest the features of dependent claims 2-6 and 11-15. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 1-7, 9-16 and 18-20 under 35 U.S.C. § 103(a).

III.   <u>Conclusion</u>

It is respectfully urged that the subject application is patentable over Aziz and Kakemizu and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,

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